Lead

EAST PENN MANUFACTURING PENNSYLVANIA

- Managed construction activities, including excavation, EnviroBlend® stabilization, placement, and structural compaction of over 30,000 tons of lead-contaminated soil and battery casings at an acid battery manufacturing plant.
- Managed remedial closure of two solid waste units.
- Placed stabilized soil and battery casings into the former ore pit and structurally compacted the material to **accommodate future upgrades to the facility. This saved the expense and liability of disposing these materials off-site**. (#70999)

C&R BATTERY SUPERFUND SITE VIRGINIA

- Used EnviroBlend® to remediate 38,000 cu. yd. of soil with a pugmill. Treated material was disposed off-site at a Subtitle D landfill.
- Averaged throughput of 1,000 tons per day.
- Reduced bulking of treated material by over 7,500 tons compared to treatment with Portland cement.
- **Saved $300,000 compared to alternative technologies.** (#70048)

WAUSAU BATTERY SITE WISCONSIN

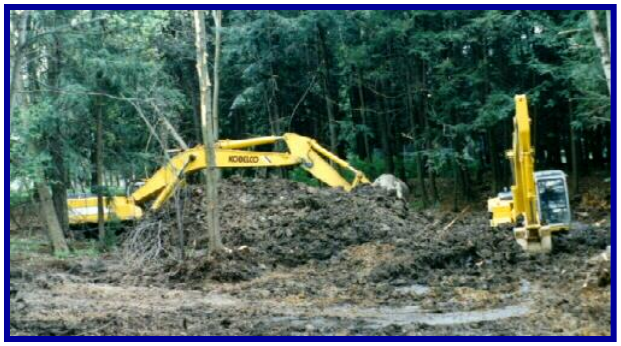
- Remediated 55,000 cu. yd. of battery reclaiming residue *in situ*.
- Used conventional construction equipment to mix materials, including some material below the water table. Monitoring has confirmed that treatment chemicals have not affected the groundwater.
- Reduced costs by approximately 55% by utilizing approved field screening method and a mobile lab for determining lead and treatment additive concentrations.
- Avoided RCRA hazardous waste permitting requirements.
- **Reduced overall remediation costs by $10-15 million compared to traditional (dig and haul) alternatives.** (#10001)

Lead

Fairmont Battery Site
Riley County, Kansas

- Conducted a time-critical removal action to clean up a site purchased as part of a residential relocation program.
- Provided construction management for *in situ* treatment and stabilization of 3,700 cu. yd. of soil impacted with lead from crushed batteries.
- Removed impacted soil to an off-site landfill and backfilled excavations with general fill.
- Completed the project within 1 month of authorization, and the client met the regulatory deadline. (#4742)

GNB Technologies, Inc.
Illinois



- Remediated 30,000 tons of soil, initially *ex situ* with a pugmill, with subsequent phases treated *in situ*.
- Used the treated material to construct a surface water diversion berm, saving the time and expense of hauling the treated material to a Subtitle D landfill.
- After the Illinois DOT identified impacted soil at another area of the facility due to a right-of-way expansion project, also treated this area *in situ* with IEPA and IDOT approval.
- **Saved the client approximately $600,000.** (#3083)

Former Manufacturing Facility
Southeastern U.S.

- Provided construction management for the treatment and off-site disposal of over 3,000 tons of foreign materials and adjacent soil that were impacted by total concentrations of lead that averaged over 48,000 ppm.
- Determined that a reasonably low dosage would be effective, which resulted in treatment bulking of less than 8 percent additional weight.
- Treatment, confirmation sampling, site restoration, and disposal of the treated material at a Subtitle D permitted landfill was **performed in less than 4 weeks**.
- Performed work in accordance with the governing agency's Voluntary Cleanup program with limited agency involvement.
- **Total treatment and non-hazardous disposal cost was less than half of the cost of hazardous waste disposal.** (#70227)

Lead

Columbia Development Corporation
South Carolina

- Remediated over 500 tons of lead-impacted soil at a potential brownfield redevelopment site.
- Rendered the soil nonhazardous without additional treatment.
- Met the client's 2-week time frame, completing the project prior to implementation of UTS standards.
- **Performed the project at one half the cost of the alternative—disposing in a hazardous waste landfill.**

(#4820)

DIAMOND STATE SALVAGE SUPERFUND SITE
DELAWARE

- Treated over 11,000 tons of lead-hazardous soil *ex situ* using EnviroBlend at a former salvage yard.
- Low dosage rate resulted in **reduced cost for transportation and disposal of treated soil**.
- Treated material was disposed off-site in a Subtitle D and TSCA landfill.
- **Project was completed in less than 7 working days.**

(#5352)

SPEAKMAN COMPANY FOUNDRY SAND SITE
DELAWARE

- Remediated over 5,000 tons of lead-impacted soil *in situ* at an operating manufacturing facility.
- Performed work under the voluntary cleanup program (VCP) in Delaware, which required the preparation of a remedial action work plan and documentation report subject to public comment and review.
- Work was completed on a 0.5-acre site in a mixed residential and commercial area without affecting neighboring properties.
- **Total project cost was over 60 percent less than the cost of hazardous waste disposal.** (#4811)

Lead

LEMAC FOUNDRY PENNSYLVANIA

- Rendered over 350 tons of lead-affected soil nonhazardous using EnviroBlend.
- Transported and disposed the treated soil at a Subtitle D landfill, **which provided significant savings over disposing at a hazardous waste landfill** (#5320)

HOME DEPOT PENNSYLVANIA

- Treated over 500 tons of lead-affected soil from a former police pistol range with EnviroBlend and rendered soil nonhazardous.
- Placed treated soil on-site under the direction of the PaDEP under the new progressive Act II guidelines.
- Placed soil 20 feet below the parking lot of the new Home Depot constructed at the property, which **saved transportation and disposal costs**. (#4761)